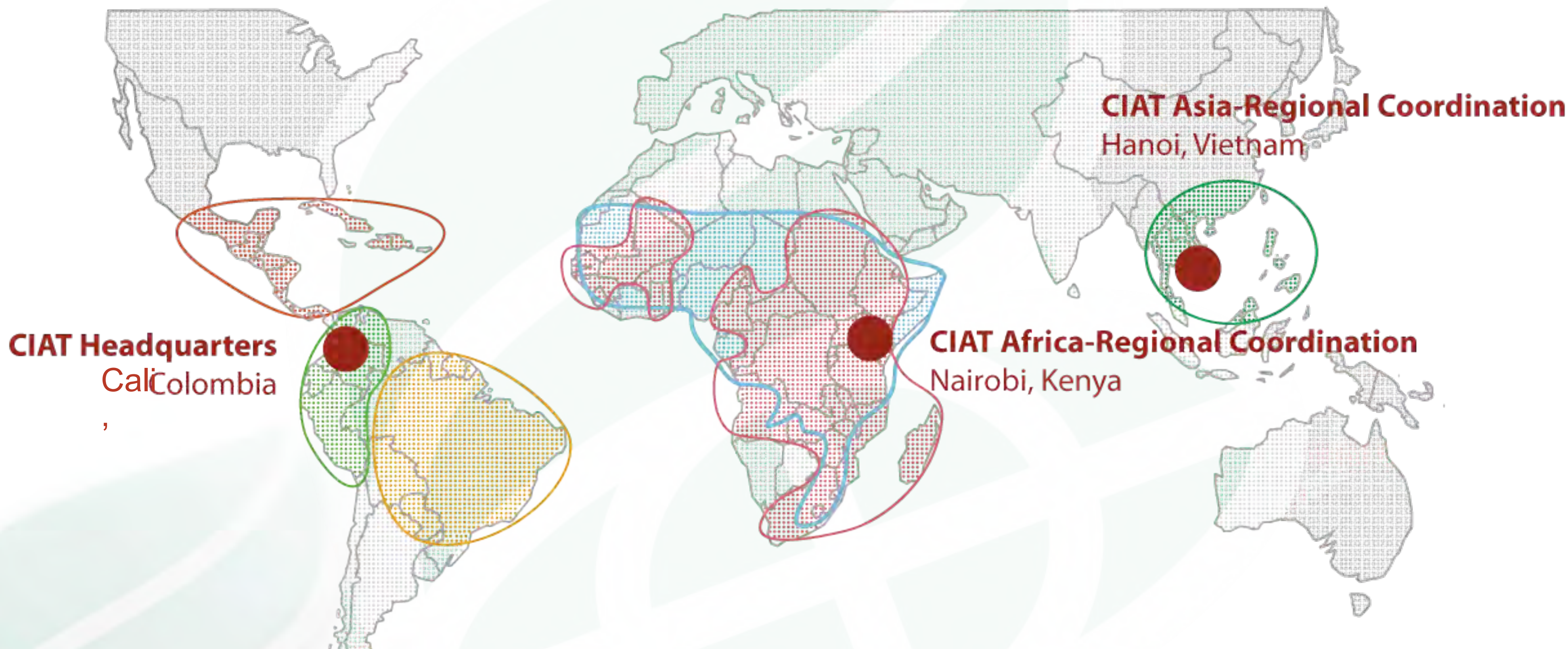
Updates on Impact Oriented Agricultural Research In Africa

CIAT

Since 1967 / Science to cultivate change

www.ciat.cgiar.org

CIAT's Regional Programs



Since the 1960s, with a current focus on Central America, Colombia, and the Amazon

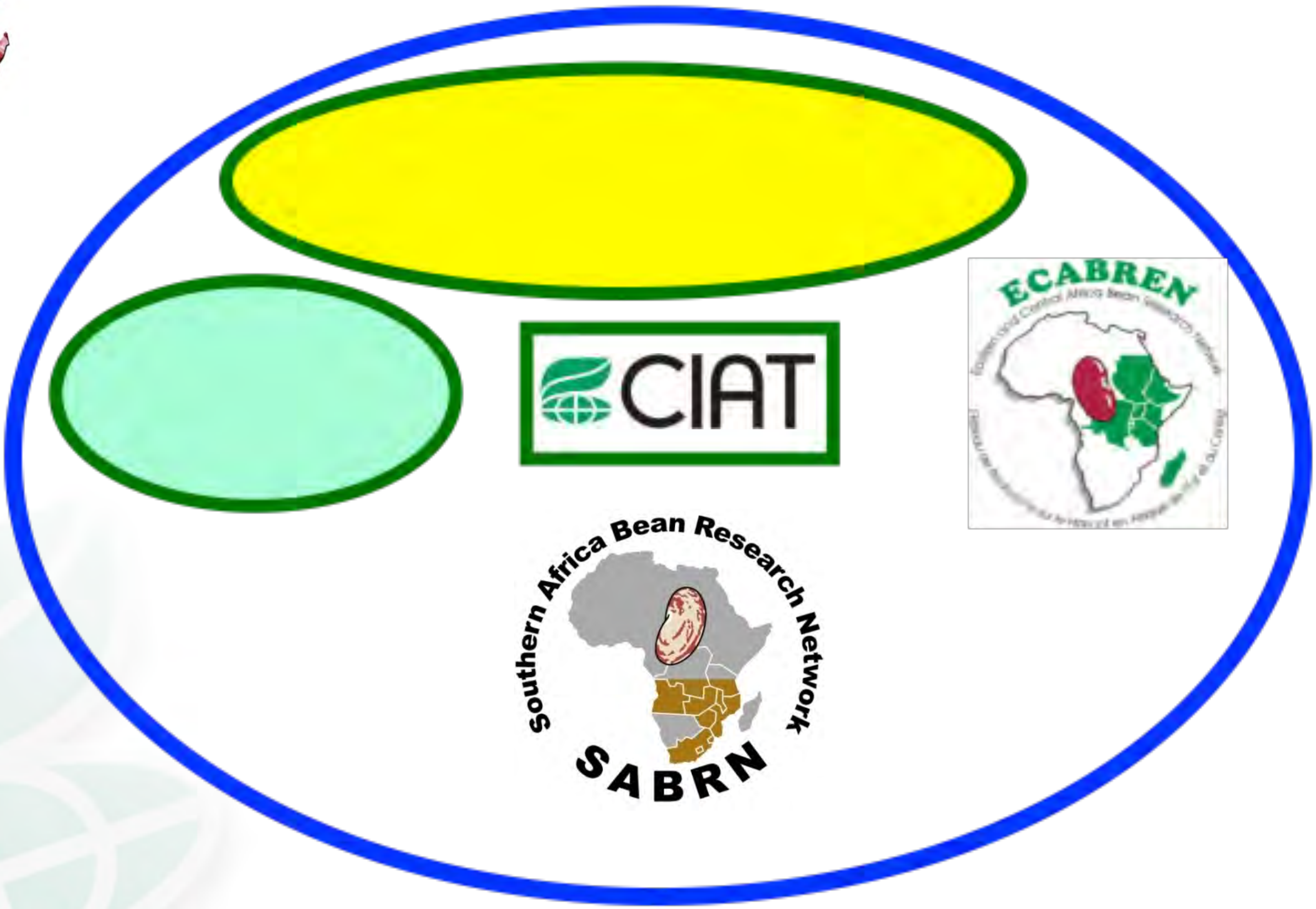
Since the 1980s, with activities now in 29 African countries

Since the 1990s, with activities now in China, Vietnam, Laos, Cambodia, and Thailand

Pan-Africa Bean Research Alliance
PABRA

Africa Bean Research Alli

PABRA – A CONSORTIUM OF AFRICAN BEAN NETWORKS



CIAT/PABRA

PABRA

PABRA

Pan - Africa Bean Research Alliance

Better Beans for Africa

Other partners: NGOs, Development Agencies, Seed Companies, Farmer groups/ associations etc

PRODUCTS: Varieties, Seed System, ICM, Markets, Nutrition/utilization

CROSS CUTTING AREAS: Gender, Policy & M&E

PABRA's Partnerships
Complementary and efficient use of resources

CIAT
Biophysical /
Social
Scientists

NARES:
Management
Scientists

Development
Partners and
Policy makers

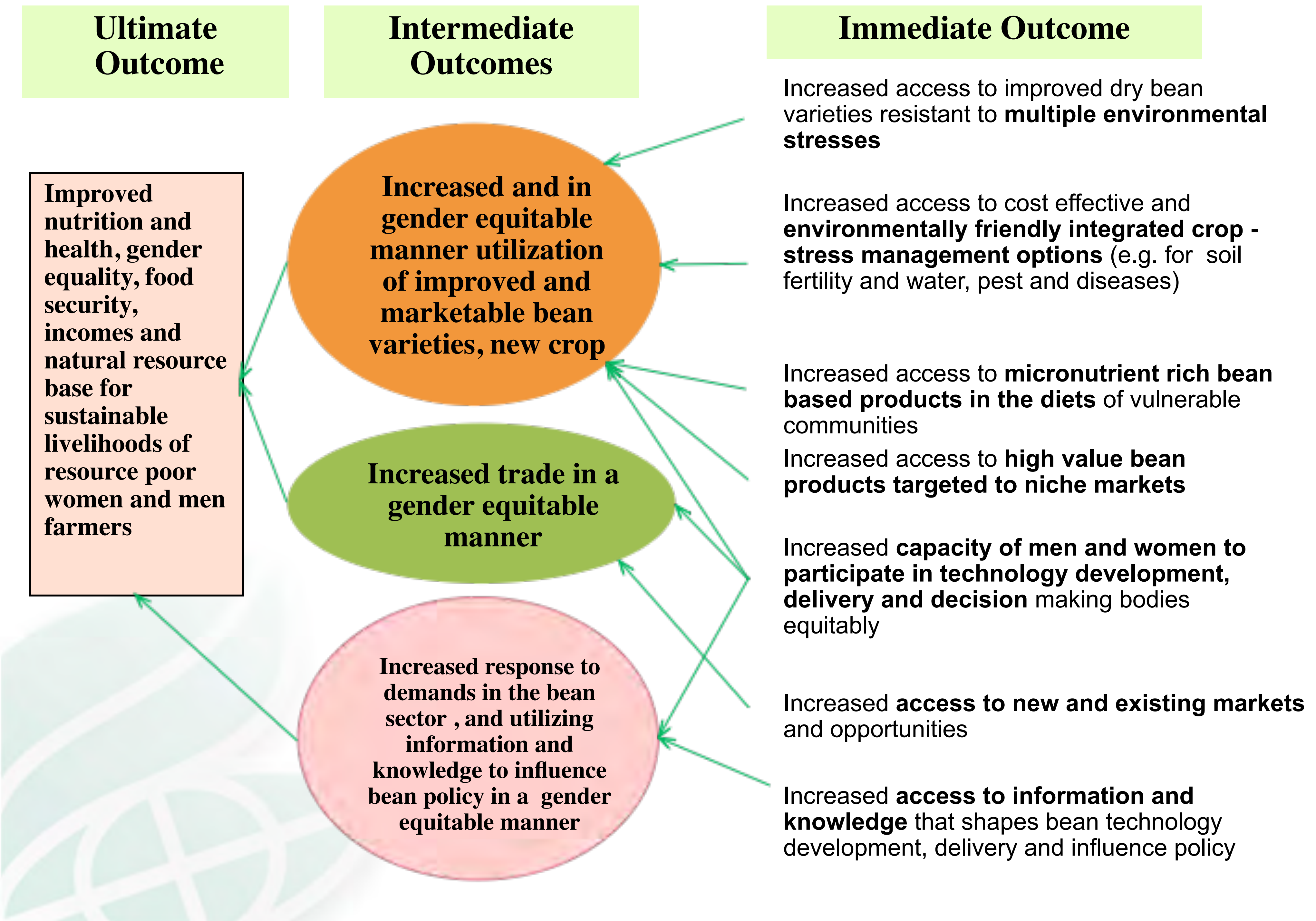
Users

Technology development + priority setting
Identify key research constraints /opportunities
- Catalyze teams for strategic and applied work
- Publish /share results to feed into future work

Technology adaptation and policy support
- Engage partners for adaptive research to refine technology across multiple countries
- Test approaches to upscale fast, widely + with equity.
- Publish and share results

Catalyze links and partnerships to reach users.
- Provide tools and methods for widespread ; skills and knowledge enhancement
- Raise awareness
- Test and use technologies

A Common Partnership Framework : PABRA Logic Model



Africa's Development Agenda
Comprehensive Africa Agricultural Development Programme (CAADP)

Four Pillars

Pillar 1
Land and water management

Pillar 2
Rural infrastructure and trade-related capacities for market access

Pillar 3
Increasing food supply and reducing hunger

Pillar 4
Agricultural research, technology dissemination, and adoption

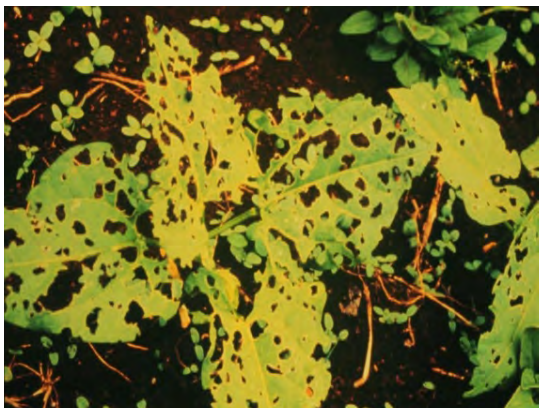
- Integrated natural resource management
- Adoptive management of appropriate germplasm
- Development of sustainable market chains
- Policies for sustainable agriculture

Framework for African Agricultural Productivity (FAAP)

Diversity of common bean market classes

Major Biotic & Abiotic Stresses in Africa

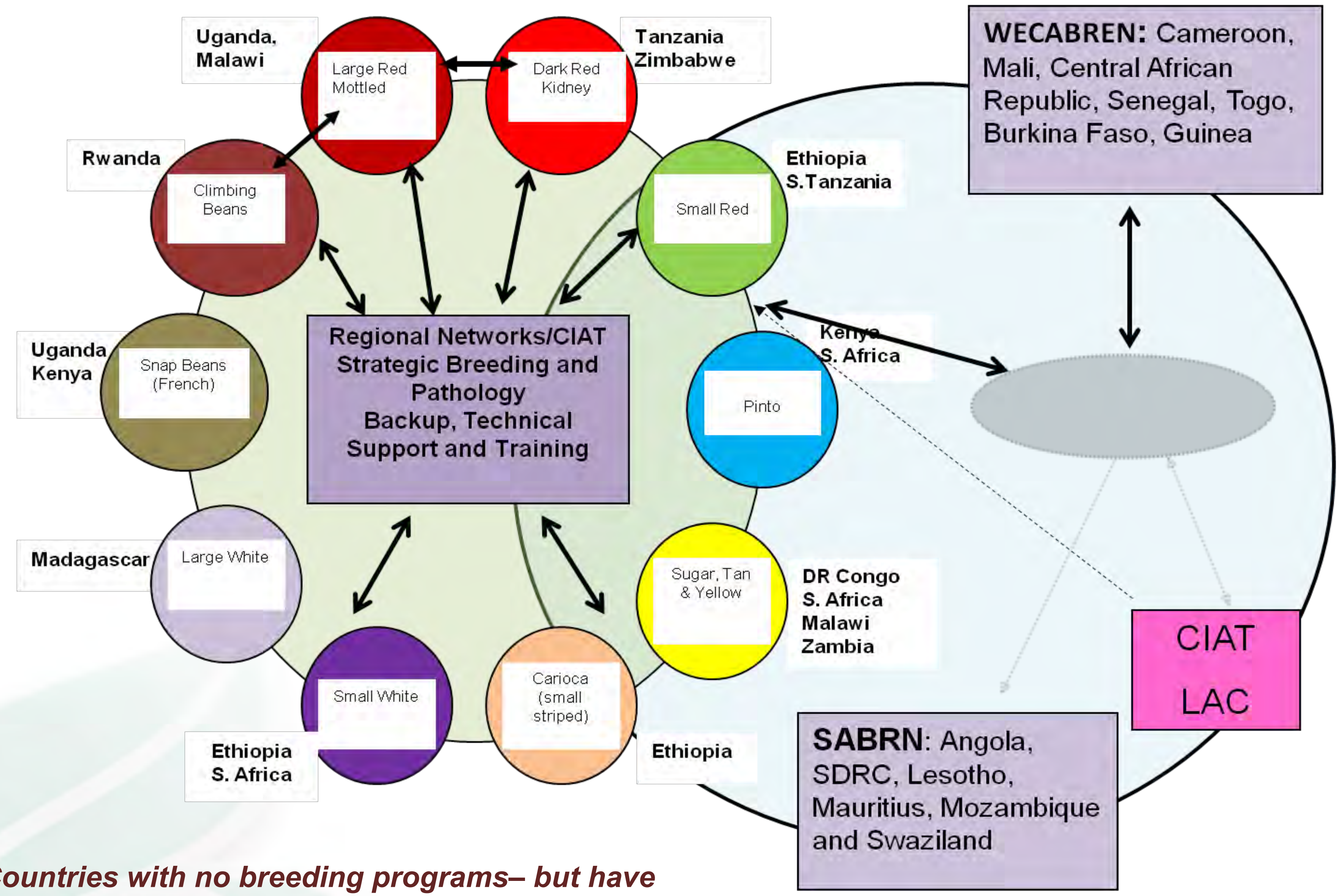
Insect Pests



Diseases

Drought and soil fertility

MARKET CLASS LED BREEDING STRATEGY



Countries with no breeding programs– but have released bean varieties. Some varieties are released in more than one country- "Nets that work for all"

Progression of Variety Development

Nurseries of different market classes and attributes: eg. Calima, Sugar, BioFORT, BILFA, ALS and drought

On-station bean trials

Participatory variety selection

Demo of potential or release bean varieties

Seed increase initiatives

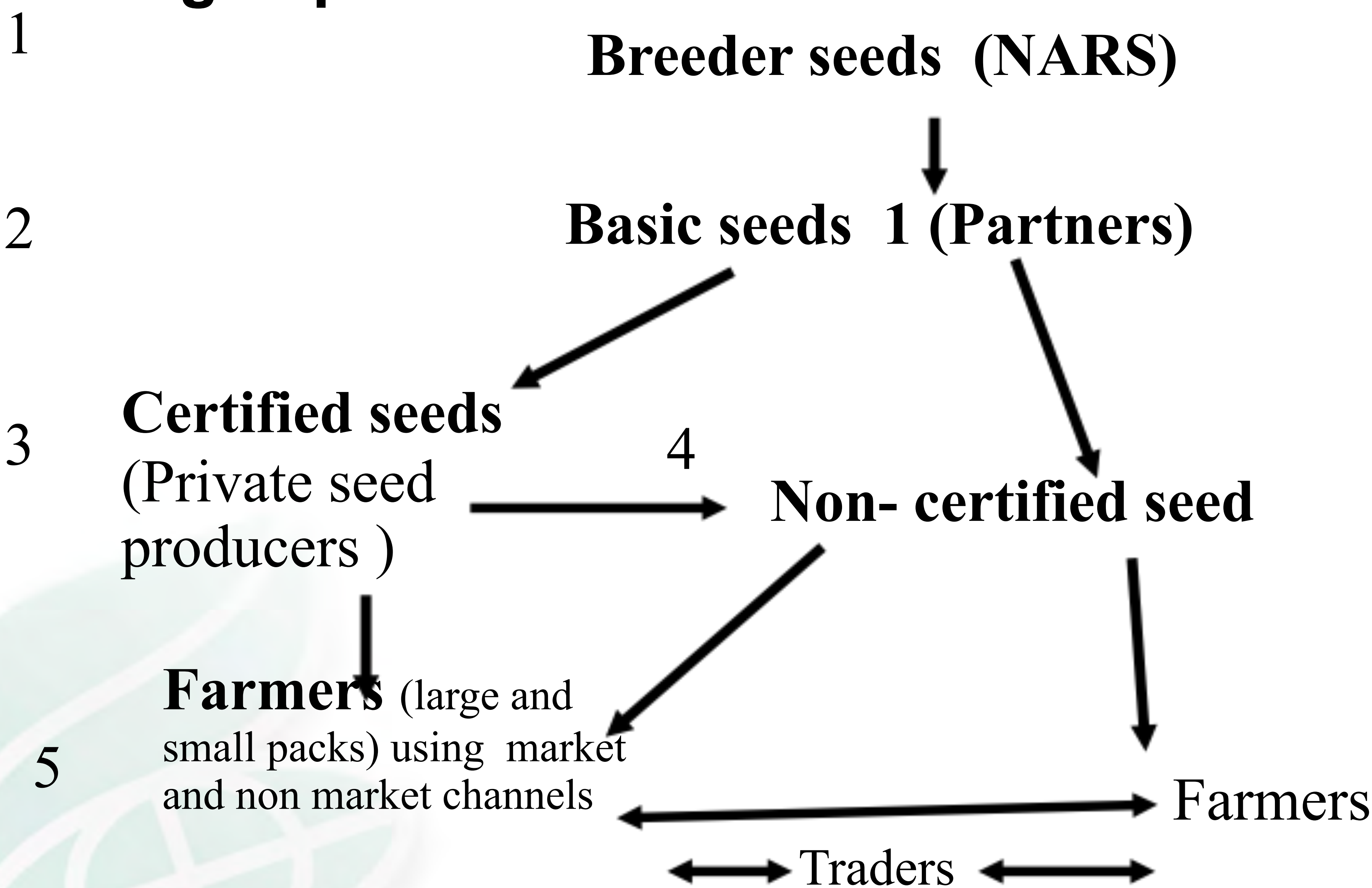
Bean varieties released across PABRA member countries (2009 -2013)

Country	Stress	Niche market	Micro nutrient dense	Total	% release by Country
Burundi	5	0	4	9	4.8
DR C E&W	11	7	11	29	15.5
Rwanda	14	5	10	29	15.5
Uganda	13	0	0	13	7.0
Ethiopia	11	0	0	11	5.9
Madagascar	6	3	0	9	4.8
Kenya	9	0	3	12	6.4
Malawi	7	1	2	10	5.3
Lesotho	1	0	1	2	1.1
Mozambique	4	3	1	8	4.3
S. Tanzania	9	3	1	13	7.0
Zambia	2	1	1	4	2.1
Zimbabwe	2	2	2	6	3.2
Swaziland	4	4	2	10	5.3
S DRC	4	0	4	8	4.3

SABRN Countries with released high Fe and Zn content bean varieties

Country	Varieties
D R Congo - South	NUA 35, HM21-7, CODMLB001, ZKA93-10M, VCB81013, CODMLV059
Lesotho	NUA45
Malawi	NUA45, NUA59
Mauritius	NUA45
Mozambique	NUA45
Swaziland	NUA45, Zebra, Maasai red
Tanzania- S/Highlands	Loba-1, Uyole-04
Zambia	NUA45
Zimbabwe	NUA45, Cherry (100ppm Fe & 54ppm Zn)

Integrated Seed System for wider impact using Improved Bean Varieties



Engaging large scale seed private suppliers

- e.g. Demeter seed company in Malawi sales over 300 tones of bean seed through the subsidy program

Influencing Policy: Small Packs

Some seed companies in Zimbabwe are using small seed packs

Research on Markets: domestic and international

Bean-based products for diverse utilization to improve nutrition

Creating business opportunities at community level

Monitoring & Evaluation

- Document evidence on impact
- Generate lessons for improved delivery
- Getting messages out to inform forward and end users

Achievement in 2009 to 2014 phase

OUTCOMES	Achievement	Target	% over target
Multiple resistant varieties	15,517,785	12,000,000	29.3%
Integrated crop management options	7,379,905	5,000,000	47.6%
Micronutrient varieties and products	1,518,263	1,500,000	1.2%
Niche market varieties and value added products	2,111,869	1,500,000	40.8%
Women involvement & participation	52%	36%	44.4%
Access to skills and knowledge to partners and farmers	97,903	86,880	12.7%

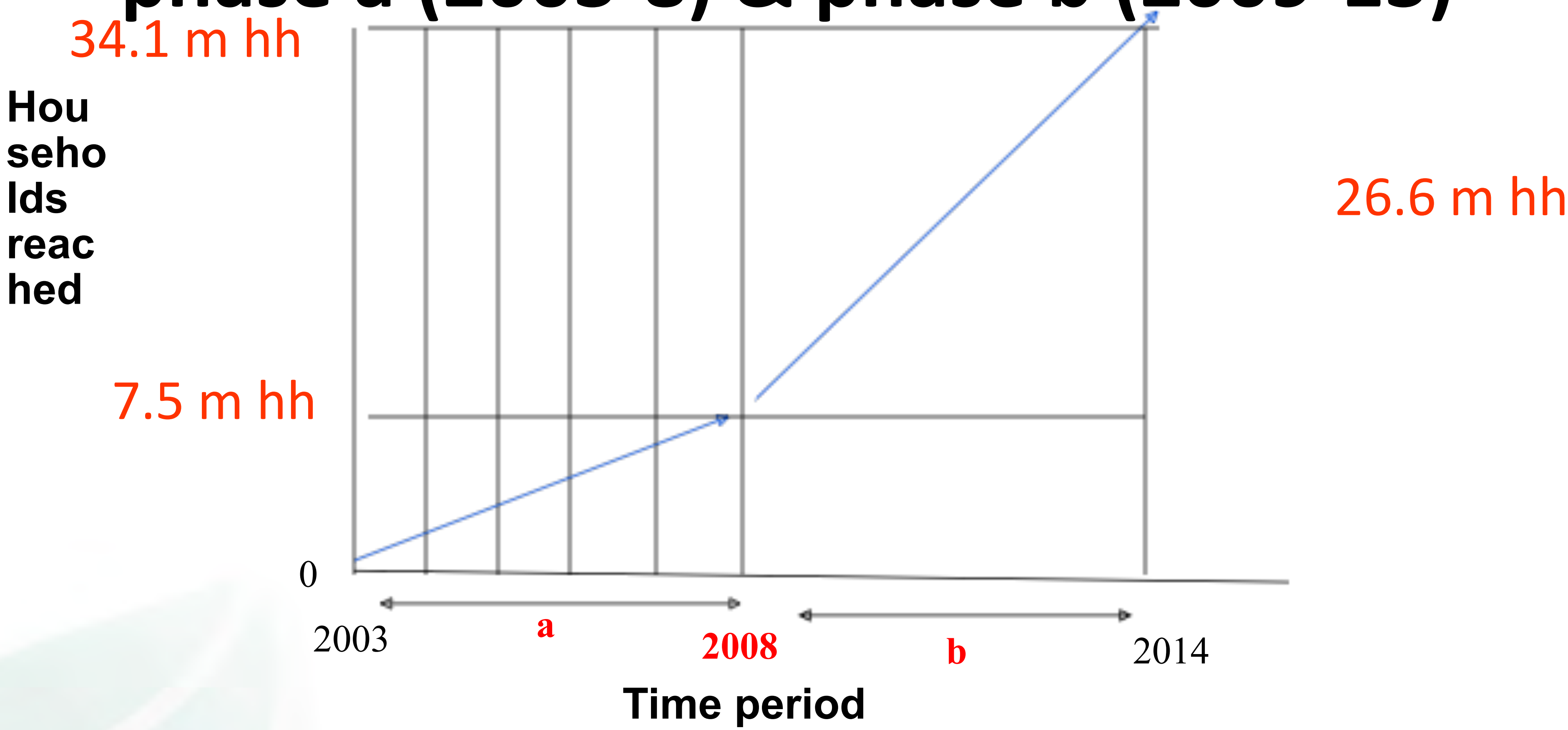
PABRA
PAN-AFRICA BEAN RESEARCH ALLIANCE
Better beans for Africa

Gender proportions in access to technologies, products and services

Outcome	Female	Male
Access to multiple stress varieties	59%	41%
Access to ICM technologies	50%	50%
Access to micronutrient dense varieties and products	64%	36%
Access to niche market varieties and products	42%	58%
Men and women beneficiaries accessing market services	42%	58%
[illegible] knowledge	56%	44%

PABRA
PAN-AFRICA BEAN RESEARCH ALLIANCE
Better beans for Africa

Access to bean-based technologies – PABRA phase a (2003-8) & phase b (2009-13)



At 5 people per household (hh); phase a = 37.5 m and phase b = 95.5 m, making a total 133 m beneficiaries over 11 years (2003-2014).

Partnership is the basis for PABRA

A total of 418 partners between 2009-2014

% Proportion of PABRA Partners by category 2009-2014

Future perspectives

- Bean for improved nutrition security – more utilization of biofortified bean and bean-based products
- More emphasis on climbing bean for warmer environments – increased productivity
- Engage more and diverse partners in bean seed production
- Promote bean trade at local, regional and international levels – for better income
- Promote processed bean products – value addition (pre-cooked, canned and others) for the emerging middle class population & rising urban population


Thank you